#10 Request for Reconsideration 1/21/04 CNB

October 16, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Art Unit 3673, Application No. 09/751,264
Examiner: Mr. Frederick L.Lagman

The following items are submitted subsequent to Advisory Action mailed on 10/8/03.

1. Applicant appreciates the phone calls placed by Examiner and the offer for claims revision. Applicant regrets only messages were left and never holding a conversation with Examiner.

2. Howard's superstructure comprised decks 18 and 20 (column 3 line 20) and a number of other parts. The superstructure provides little incremental buoyancy. In comparison with MWB, decks 18 and 20 have only the water displacement effects equivalent to that of the live load stabilizers from Applicant's Claim 2. The four struts shown connecting the two decks are nothing more than minimum cross sectional area supports in the most extreme case, with minimum water displacement to increase buoyancy. If Howard's platform starts to oscillate with large amplitudes, the superstructure would be incapable of impeding any wild vertical motions. However, the lack of superstructure buoyancy did not affect Howard as the design was intended to operate like a tension leg platform, and oscillation in a deep-water environment was not considered.

Howard's superstructure included a buoyant means 80 (column 4 lines 7 and 8). The specifications stated in column 4, lines 20-22, that "Buoyant tanks 80 maintain tension on the riser pipe 22A. The pipe is thus pulled down against this upward force of buoyant means 80." This component acts as a cork to keep tension on the pipe and is consistent with Howard's focus on static forces, rather than dynamics of motion. As the buoyant means is continuously engaged, it does not provide incremental restoring force so as to vary the coefficient K in the differential equation from Applicant's specifications.

In short, while Howard showed general components similar to a substructure, a minimized wave-zone buoyancy structure, and a superstructure, the lack of adequate superstructure buoyancy renders Howard's design ineffective in maintaining vertical stability in a deep-water environment. The shallow-water completion structure envisioned by Howard can not be scaled up and would not be acceptable for general drilling and production activities where the platform may bobble up and down like a cork in the middle of the ocean.

3. The MWB application stated in the specifications, page 4, second paragraph under Discussion of the Present Invention, that "...the platform has a superstructure 20 which provides space for such equipment and facilities. Superstructure 20 also provides buoyancy to keep the platform afloat in the event that water rises to the level of the superstructure." The buoyancy of superstructure 20 of MWB is superior to Howard in two ways: 1) it provides a variable K coefficient that would tend to break up resonance in the unlikely event of harmonic excitation, and 2) the large floatation capability provided by the superstructure inhibits large amplitudes and prevents the entire platform from sinking too far. A buoyant superstructure together with the substructure act on a grand scale like giant stabilizers with limited-free-movement in between, as disclosed in Applicant's specifications, page 6, 4th paragraph, starting at line 5, "...a big donut floating stabilizer could replace all floating stabilizers shown. A limited-free-movement means could permit the donut to slide freely up and down the MWB structure but would prevent the donut from moving beyond certain heights, for example, by obstructions welded on the MWB structure to limit movement. Therefore, the donut floating stabilizer would not provide buoyancy lift until the platform has sunk to a predetermine depth and would become a downward force when it is lifted out of the water by the rising platform. It would be obvious that slack cables 120 and the sliding donut are just specific forms of limited-free-movement means." In effect, the buoyant superstructure and substructure act like giant donuts permanently attached on top and at the bottom, and the MWB platform envisioned by Applicant behaves in the base case like two big stabilizers connected by one big limited-free-movement means, which is the essence of Claim 3. On the other hand, Howard's platform can never produce the desired limitation on dynamic response without sufficient superstructure floatation capability.

4. Request to amend claims.

The results deriving from the buoyancy of Applicant's superstructure could not be anticipated by Howard since Howard's superstructure did not provide such buoyancy. In fact, superstructure buoyancy would run counter to Howard's focus to reduce riser pipe tensile static stresses by adjustment of floatation. Accordingly, it is requested to amend Claim 1 to include superstructure buoyancy with new additions shown in italicized bold text, to amend Claim 3 to delete the word "from" which is struckthrough, and to amend Claim 4, replacing limited-free-movement means with slack cables, as follows,

1. A floating platform comprising:
a superstructure; a minimized wave-zone buoyancy structure; and a substructure;
with said superstructure capable of floating and effective in providing buoyancy to keep platform afloat;
with said minimized wave-zone buoyancy structure having a low cross sectional area;
with the minimized wave-zone buoyancy structure having sufficient height to range over ocean waves;
with said substructure effective in providing buoyancy and stability; and
with the minimized wave-zone buoyancy structure effective in transmitting ***the*** superstructure's weigh to the substructure. (rejected)

2. A floating platform according to claim 1, further comprising one or more live load stabilizers, with said live load stabilizer or stabilizers attached to said minimized wave-zone buoyancy structure at a region from slightly above water level to slightly below water level so that the live load stabilizer or stabilizers operate in and out of the water and are effective in displacing water and in providing increased buoyancy lift when submerged. (objected)

3. A floating platform according to claim 1, further comprising:
one or more floating stabilizers; and limited-free-movement means;
with said floating stabilizer or stabilizers effective in providing buoyancy lift;
with the floating stabilizer or stabilizers attached to said floating platform ~~from~~ above said substructure by said limited-free-movement means; and
with the floating stabilizer or stabilizers floating at water level when the limited-free-movement means is slack and not engaged. (objected)

4. A floating platform according to claim 1, further comprising ***one or more slack cables***, with said floating platform ***attached*** to ocean bottom by said ***slack cables and with the slack cables coming into tension only after the floating platform has been displaced upward by a predetermined distance***. (rejected)

Applicant thanks the Examiner for his comments and hopes the above revisions are acceptable.

Sincerely,

Andrew W. Chow

Andrew W. Chow, Applicant
15306 Parkville Drive
Houston, TX 77068